
Understanding the co-existence of conflict and cooperation: Transboundary ecosystem management in the Virunga Massif

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Abstract

This article contributes to our understanding of transboundary environmental management regimes through the application of an analytical framework that facilitates an exploration of the co-existence of conflict and cooperation. Rather than framing conflict and cooperation as mutually exclusive states at opposite ends of a spectrum, we seek to understand the ways in which cooperation can exist at the same time as conflict. We apply this framework to a study of conservation management in a transboundary area at the intersection of the Democratic Republic of Congo, Rwanda and Uganda. We identify two actual and one hypothetical phase of conflict–cooperation relations, in a landscape notorious for some of the worst violence of the last two decades. We map the evolution of phases of transboundary protected area management against the evolving security context, and we find that this approach has greater explanatory power than previous approaches that polarize conflict and cooperation. In particular, it helps us to understand the drivers of environmental cooperation, including the evolving characteristics of that cooperation. This new way of understanding the relationship between environmental management and security also enables us to reconsider the potential for environmental management to be instrumental in working towards interstate security objectives, for example through peace parks. We don't find that the 'low politics' of environmental management should be seen as a predictable and manageable determinant of international relations. But an understanding of the coexistence of conflict and cooperation does also point to a more complex, non-linear relationship between low and high politics.

Keywords

Albertine Rift, ecosystem services, environmental conflict, peace parks, transboundary protected areas

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Introduction

Transboundary regimes for managing parks and natural resources grew in popularity during the 1980s and 1990s, owing to their potential contribution to sustainable development and peacebuilding. Many ecosystem functions and services operate across political borders with, for example, hydrological services often requiring regional management regimes and carbon storage requiring global strategy. Furthermore, political leaders are increasingly aware of the multiple ways in which these services support human well-being at a range of scales (Millennium Ecosystem Assessment, 2005). Border areas often make particularly large contributions to human welfare in this way, owing to the presence of, for example, high biodiversity, forested hills and border rivers. And yet, protecting such wealth through collaborative management poses particular challenges in such areas, especially where conflict exists within and between the neighbouring states.

This article seeks to further our understanding of the relationship between conflict and cooperation in transboundary ecosystem management. It does this through a study of protected areas in the Virunga Massif, the southern part of the Greater Virunga landscape that straddles the intersection of the borders of Uganda, Rwanda and Democratic Republic of Congo (DRC). One of the remarkable stories from this landscape is the way in which cooperation over biodiversity conservation has slowly but steadily evolved despite often intensely violent conflicts. As such, this is also a location that most clearly challenges forms of analysis that position cooperation and conflict as mutually exclusive states of relations. We think the limitations of this way of thinking are clear enough and, therefore, we adapt a framework developed by Mirumachi & Allan (2007) that considers the co-existence of conflict and cooperation. This framework enables us to better understand the emergence of cooperation and also provides insight into the linkage between environment and security and thus between low and high politics. Before detailing the development and use of this framework, we briefly review the environment and conflict literature with an emphasis on transboundary issues, which leads into a summary of the ecological, economic and political rationales for transboundary management regimes. Following development of the conceptual framework, we apply it to the case study, using evidence gained from semi-structured interviews with 38 key actors in protected area authorities and environmental NGOs. Interviews took place during visits to the three countries in 2008 and 2009.

Natural resources, conflict and cooperation

Natural resources play an important role in the dynamics between individuals, communities and states because of the social, economic and political values that flow from ecosystem functions. This flow of values to human society is commonly conceptualized as a set of ecosystem services, underpinned by biodiversity, including provisioning services (goods such as timber and non-timber forest products), cultural services (including aesthetic benefits), regulatory services (including climate and water regulation) and supporting services (such as pollination and soil formation). These resources and services often straddle international borders, and these border regions often contain the most intact ecosystems (Griffiths, 1995).

Some authors consider that competition for scarce and threatened resources and services can lead to disputes and even be the cause of armed conflict among and within states (Klare, 2001; Renner, 2002). Normally the causal relation is not considered to be direct, but mediated by social variables such as poverty and inequality. Competition for resources, in the contexts of poverty and perceived distributional injustice, can thus lead to amplification of existing social fault-lines such as ethnic difference (Kaplan, 1994; Baechler, 1999), a pathway that is most likely where state and other institutions are dysfunctional (Homer-Dixon, 1999). Several authors propose that the utilization, allocation and degradation of land and water resources have been among the sources of conflicts in, for example, the Jordan Valley, Sudan, Rwanda and Mexico (Lowi, 1993; Suliman, 1999; Howard & Homer-Dixon, 1995; Percival & Homer-Dixon, 1996). On the other hand, such indirect causality is difficult to evidence and this analytical approach has been criticized for privileging local explanations (population and resources) over more fundamental matters of distribution rooted in the global political economy (e.g. Peluso & Watts, 2001).

Regardless of whether we assert contested environmental resources as causes of conflict, transboundary forests such as those in the Virunga Massif have often become *sites* of conflict. This is because, firstly, conflicts often take place between neighbouring countries (Furlong & Gleditsch, 2003); secondly, the borders themselves may be contested (Starr & Thomas, 2005); thirdly, they can become sites of military conflict and sanctuaries for both combatants and civilians, owing to their strategic locations (Austin & Bruch, 2003; McNeely, 2003b); and fourthly, valuable forest-based resources, including gold, coltan and some timbers and charcoal, can provide the resources to

sustain and escalate existing conflicts (Bannon & Collier, 2003).

Borders between hostile states can become zones of conservation, such as that between North and South Korea (Westing, 2010). But they can also become degraded in the face of conflict and its aftermath because of vacuums in authority, movements of armies and civilians, and subsequent pressures for land for resettlement (Rutagarama & Martin, 2006). Wars and conflicts can have direct negative impacts on forests and biodiversity, such as habitat destruction, erosion and pollution, as well as more widely felt impacts through the reduction in regulatory ecosystem services such as moderation of river flows (McNeely, 2003). While such environmental change can undermine local well-being in the longer term, there are often more immediate tragedies: in contemporary African warfare, most victims are resource-dependent civilians (Ross, 2004).

Just as natural resources are sites of everyday and extraordinary conflicts, so too are they sites of cooperation. For example, shared water resources have been more a driver for cooperation between states than a driver of conflict (Wolf, 1998), and there is growing policy interest in the role that environmental governance can play in peacebuilding (UNESCO, 2003; DFID, 2007; UNEP, 2009). It is not so much that conflict and cooperation are entirely separate pathways, but rather that competition for scarce resources can spur institutional innovation boosting social capital and adaptive capacity. Hence, while Kaplan (1994) and others view competition for resources as driving a vicious cycle of social dislocation, others look to the possibility of a virtuous circle based on better governance (Martin, 2005). There are already a number of international water agreements signed between riparian states, and associated collaborative management institutions, such as the Nile Basin Initiative. Equally, the number of land-based Transboundary Conservation Areas (TBCAs) grew gradually in the second half of the 20th century until around 1990, at which point it began to increase more rapidly (van der Linde et al., 2001) with 59 TBCAs in 1988 and 188 in 2005 (Ali, 2007), albeit that cooperation is often at relatively low levels (Zbicz, 2003). We identify four broad sets of reasons why governments and other actors have become interested in Peace Parks and other forms of cooperation over transboundary environmental management:

1. The ecological rationale

The ecological case for transboundary management of biodiversity is based on the need for larger scales of management, requiring joining of parks but also extension of

conservation beyond park boundaries. This is often part of a case for 'landscape' level management, which is desirable where ecological structures at this scale can be expected to significantly affect species abundance and distribution (Fahrig, 2005; With, 2005). Many protected areas are not large enough to preserve biodiversity in the long term, and we know that species can become extinct even when they exist in protected areas (Wilkie, Adams & Redford, 2008). Also, solitary parks are often too small to maintain evolutionary and ecological processes (Danby & Slocombe, 2005), although this is only a particular transboundary issue where borders have physical barriers to movement.

2. The economic rationale

Transboundary cooperation in both the water and conservation fields is also justified in terms of a contribution to economic development. The argument goes that transboundary cooperation brings about a 'basket of benefits', including direct and indirect economic benefits for the states involved and their communities (Sadoff & Grey, 2005). In addition, it is argued that the benefits accrued by states through cooperation are greater than they could derive individually. In brief, it is expected that institutionalized transboundary cooperation may contribute to enhanced economic growth and development and, eventually, economic integration and regionalization (Ali, 2007). In the specific case of conservation, it is expected that cooperation can generate direct economic benefits – such as ecotourism revenue – but also indirect benefits such as the economic growth of marginalized borderlands, poverty reduction and socio-economic benefits for local communities (Jones & Chonguica, 2001; Wolmer, 2003; Ali, 2007). Such integration of conservation and economic development objectives is explicit in the Great Limpopo Transfrontier Park (Büscher & Dietz, 2005).

3. The political rationale

The transboundary cooperation goals can exceed the environmental and economic realms and include what Sadoff & Grey's (2005) study of water resources refers to as 'benefits beyond the river'. In the conservation field, there is the expectation that institutionalized cross-border cooperation will enhance regionalization. This is particularly the case in the Southern Africa region where ideologically-laden concepts such as regional integration, democratization, the African renaissance, and peacebuilding go hand in hand with the establishment of transboundary protected areas (van Amerom &

Büscher, 2005). Other political benefits associated with transboundary cooperation include its potential capacity to mitigate the impacts of conflicts and to eventually establish lines of communication between conflicting partners (Shambaugh, Oglethorpe & Ham, 2001; Thorsell, 1990).

4. *The peacebuilding rationale*

Since the mid-1980s, against a backlash of 'resource wars' inspired by realist thinking, international organizations have begun to disseminate liberal-inspired concepts such as 'water for peace' and 'parks for peace', with the understanding that environmental cooperation could have multiplying effects and be a catalyst for regional stability (UNESCO, 2003; UNEP, 2009). The underlying contention is that the institutionalization of international resource governance cooperation can lead to the establishment or strengthening of international friendship (Shine, 1997). Historical examples include the creation of Transboundary Protected Areas (TBPAs) between Poland and Czechoslovakia in 1924 (Westing, 1993) and the United States and Canada in 1932 (MacDonald, 2000). TBPAs can reinforce harmonious relations, contribute to conflict prevention and promote confidence-building between neighbouring countries (Westing, 1998), particularly in areas with relatively recent histories of conflict (Hanks, 1998; Sandwith et al., 2001; Hammill & Besançon, 2003; Ali, 2007). If such claims prove well-founded, TBPAs might contribute to reducing conflict re-occurrence rates: 44% of countries having a violent conflict are back at war within 5 years of a ceasefire (Bannon & Collier, 2003).

Not all scholars are persuaded by claims that TBPAs have peacebuilding potential. For one thing there is a lack of empirical evidence of peacebuilding outcomes, and parks are likely to have relatively little independent effect on international relations (McNeely, 2003b). Furthermore, securitizing environmental issues such as biodiversity conservation might help to push them onto policy agendas – Kaplan's (1994) piece was reportedly read widely in US political and military circles – but this may distract (e.g. donors) from the real human security issues faced by the rural poor in developing countries (Barnett, 2001). The packaging of environmental cooperation as a security initiative might also serve to obscure real political economic agendas such as economic liberalization, the commodification of parks and wildlife, or the furthering of an individual country's regional political ambitions (Wolmer, 2003; van Amerom & Büscher, 2005). In these and other ways, therefore, it is possible

that, rather than promoting peace, the establishment of TBPAs could exacerbate old border conflicts between states and/or create new ones, for example through unequal distribution of new income streams among the countries (van Amerom & Büscher, 2005). The establishment of TBPAs might also exacerbate conflicts between governments and local communities through, for example, land grabs and evictions, loss of access to resources, and (re-)centralization of control over both resources and people (Brockington, Duffy & Igoe, 2008; Neumann, 2000; Brottem & Unruh, 2009; Dzingirai, 2004).

Amid such uncertainties, what we can be sure of is that transboundary forests have often been *sites* of conflict and increasingly in recent years have become sites of cooperation. While there is a critique of the peacebuilding potential of TBPAs, there remains hope that they could develop into a force for good in regional politics by helping to internalize norms, establish regional identities and interests, facilitate international communication and, ultimately, encourage more effective management of shared natural resources (Brock, 1991; McNeely, 2003b). The rest of this article focuses on a little understood feature of TBPAs, but one we believe is critical to their potential to deliver benefits: the dynamic coexistence of conflict and cooperation, and the implications for the forms of cooperation that emerge.

Conceptualizing the dynamic coexistence of conflict and cooperation

It is not uncommon to see conflict and cooperation represented as opposite poles of a spectrum. For example, the Conflict and Peace Databank (COPDAB) scale ranges from level 1, representing the most cooperative events, through level 8 (neutral) to level 15, representing the most conflictive events (Azar, 1993). Understanding natural resource management dynamics as *either* conflict *or* cooperation, or understanding them as opposing poles, obscures the reality of the vast majority of contexts in which cooperation and conflict actually coexist (Zeitoun & Mirumachi, 2008). Examples of the coexistence of cooperation and conflict (with different intensities) may be identified, including:

- The existence of formal cooperation through agreements and joint institutions notwithstanding the existence of conflicts of interests among users (high cooperation; low conflict), e.g. the Great Limpopo Transfrontier Park.

- Informal communication and consultation between national protection authorities, supported by Memorandums of Understanding (MoUs), but no formal institutionalization as yet (low cooperation; low conflict), e.g. Niassa–Selous corridor (Mozambique–Tanzania).
- Informal collaboration during times of civil or interstate war (low cooperation; high conflict), e.g. the Virunga Massif during the 1990s.

Instead of conceptualizing conflict and cooperation one-dimensionally, that is, on a continuum along a single axis, Mirumachi & Allan (2007) find that greater understanding can be gained from a multi-dimensional framing of the interaction between conflict and cooperation. Their framework represents different intensities of conflict and cooperation as axes on a two-dimensional matrix, while also engaging with a third dimension, time. We find this useful as a prompt for thinking about the evolving state of transboundary relations. For our analysis of conflict and cooperation in the Greater Virunga we have adapted the scales of conflict and cooperation, calibrating them to the regional political and environmental context. We proceed to explain how we developed these scales.

Scales of conflict in a cross-border region

The Great Lakes region of Central Africa has been the stage of several inter- and intrastate conflicts, often with cross-border causes and spillover effects (Lemarchand, 2009; Prunier, 2008). Conflicts between and within Rwanda, DR Congo and Uganda have been at the heart of this violent history. The border parks of the Virunga Massif, including the contiguous Volcanoes National Park (Rwanda), Mgahinga Gorilla National Park (Uganda) and Virunga National Park (DRC) have not been the *cause* of the conflicts but have repeatedly been *sites* of conflict.

For the purpose of our framework, we adapt a categorization of conflict intensity levels identified by Azar (1993), modified by Wolf, Yoffe & Giordano (2003) and simplified by Zeitoun & Warner (2006) into three very broad categories: ‘no significant conflict’, ‘cold conflict’ and ‘violent conflict’. We change the terminology, opting for low, medium and high-level conflict, and define them as follows:

High-level conflict: Generalized armed conflict (a) between states or (b) within states, with major causes and/or effects in the neighbouring countries. Examples of (a) include the second Congo war, 1998–2003 (and

arguably beyond that) described by Prunier (2008) and Turner (2007) as ‘Africa’s world war’, and the 1990–94 Rwandan war in which the Congo and Rwanda governments were opposed to the Uganda government and the Rwanda Patriotic Front (RPF). Examples of (b) include the genocide in Rwanda (1994) and the Kivu wars in DRC since 1996. In all cases, the causes and effects have been transboundary. In our categorization, the Virunga Massif was in and out of this highest-intensity transboundary conflict from 1990 to 2003.

Medium-level conflict: Scattered armed or political conflict (for example in pre-conflict and post-conflict situations) including some transboundary causes and effects. Examples include the severing of diplomatic relations, closing of borders, political spillover effects, and those entailed by refugee movements. We categorize the Virunga Massif in this way from 2003. While deadly violence has continued, especially in the North Kivu district of DRC, and this conflict has a transboundary dimension, this is less intense than the preceding 1998–2003 Congo War.

Low-level conflict: Generalized peace between and within neighbouring countries, although (potentially) exhibiting signs of political volatility and/or low-intensity localized conflicts. Since the independence period, the region as a whole has not experienced a situation of comprehensive or relative peace. Uganda and Rwanda are now experiencing a period of political stability, but it is too early to call the outbreak of peace in Eastern Congo and this conflict still has regional characteristics stemming from wars in the 1990s.

No conflict: A situation of comprehensive peace and political stability and security.

Scales of cooperation

The Virunga network of protected areas has also been an arena for evolving transboundary cooperation over conservation despite enduring regional instability (van der Linde et al., 2001; Lanjouw, 2003; Plumptre, 2003; Martin et al., 2011). In order to analyse the drivers behind and the evolution and implications of transboundary cooperation, we identify different levels of cooperation/coordination to populate the cooperation axis of our matrix. To do so, we draw from three sources. First, the basic framework for our scale is adapted from Zbicz (1999, 2003) who identifies six levels of co-operation ranging from (1) no cooperation, going through stages of communication, consultation, collaboration and coordination, to (6) full cooperation: fully integrated, ecosystem-based planning. Second, we look at Metcalfe’s (1994)

nine-point scale of policy coordination which similarly takes us from complete independence of operation, through communication and consultation, onwards through joint working in committees and teams, to joint planning through an integrated core executive. Significantly, Metcalfe's scale is only partly normative, that is, it is generally desirable to advance to higher levels of coordination, but not always appropriate or desirable to seek the highest level of coordination. We also note that these similar scales have been applied to both cooperation and coordination. These are not quite the same thing, and we opt for a limited degree of separation on our scale to reflect the difference between formal (more coordinated) and informal cooperation.

Informal cooperation: collective action at the field level, involving local actors and/or national agencies, but which is mainly informal and focuses on specific tasks on the ground; without the existence of a formal agreement signed by high-level political representatives.

Formal cooperation: involving high-level political agreement (e.g. ministries, heads of state) between states, providing an official endorsement to norms and an institutional framework that guides cooperative 'on the ground' activities.

(Sources: Singh, 1999; Zbicz, 1999; van der Linde et al., 2001; Sandwith et al., 2001)

Bringing together these inputs, we arrive at the following five different levels of cooperation:

1. **No cooperation.**
2. **Low-level cooperation:** Some communication between authorities including bilateral talks and short-term actions; limited consultation but partners inform each other of some activities.
3. **Informal medium-level cooperation intensity:** Consultation and collaboration between local as well as national authorities to avoid overlap and conflicts, including frequent meetings and joint activities; but principally at the field and informal level, with no formal agreement.
4. **Formal medium-level cooperation intensity:** Collaboration and coordination between local and national authorities, including going beyond avoidance of overlap and conflict, to actively seek convergence of policy and priorities; joint coordination planning with a certain degree of high-level political support evidenced by MoUs. A formal joint

institution may be formed (an executive) but this remains subservient to national planning.

5. **High-level cooperation intensity:** Full and institutionalized transboundary cooperation, including a formal agreement between states at the higher political level and the establishment of a joint institution with strong executive powers; includes a regional approach including environmental, economic and political benefits; at a minimum, considerable progress towards harmonization of norms and management practices, and towards a unitary protected area and authority.

Transboundary interaction in the Virunga Massif

Border parks in the Virunga Massif have become arenas for increasingly securitized and even violent conflicts between states, while at the same time becoming arenas for progressively intense cooperation over park management. Figure 1 shows how conflict and cooperation have coexisted in the Greater Virunga over recent decades, combining different levels of intensity. Three different periods are identified and analysed.

1. The 1990–94 period (high conflict, low or no cooperation);
2. The 1995–2003 (high/medium conflict, informal medium cooperation);
3. 2004–10 (medium/low conflict, formal medium cooperation, with moves towards high levels of cooperation).

Pre-1990: Paving the way for transboundary cooperation

Informal cooperation dates back to the 1970s, although these early attempts to develop bilateral and trilateral cooperation over park management failed to gain traction. In 1973, for example, a tripartite meeting for Regional Development of Tourism was held in Kigali to develop a regional action plan, but was not followed up (d'Huart, 1989). In 1979 the Mountain Gorilla Project (MGP) was established, with a mandate to work in Rwanda only, but with an objective that was clearly transboundary. It was during the 1980s that recognition of the importance of transboundary collaboration really began to take hold and some large conservation NGOs such as Fauna & Flora International and the African Wildlife Foundation were closely involved with learning these lessons through their involvement with the MGP. Cooperation during the 1970s and 1980s remained at a low level because it

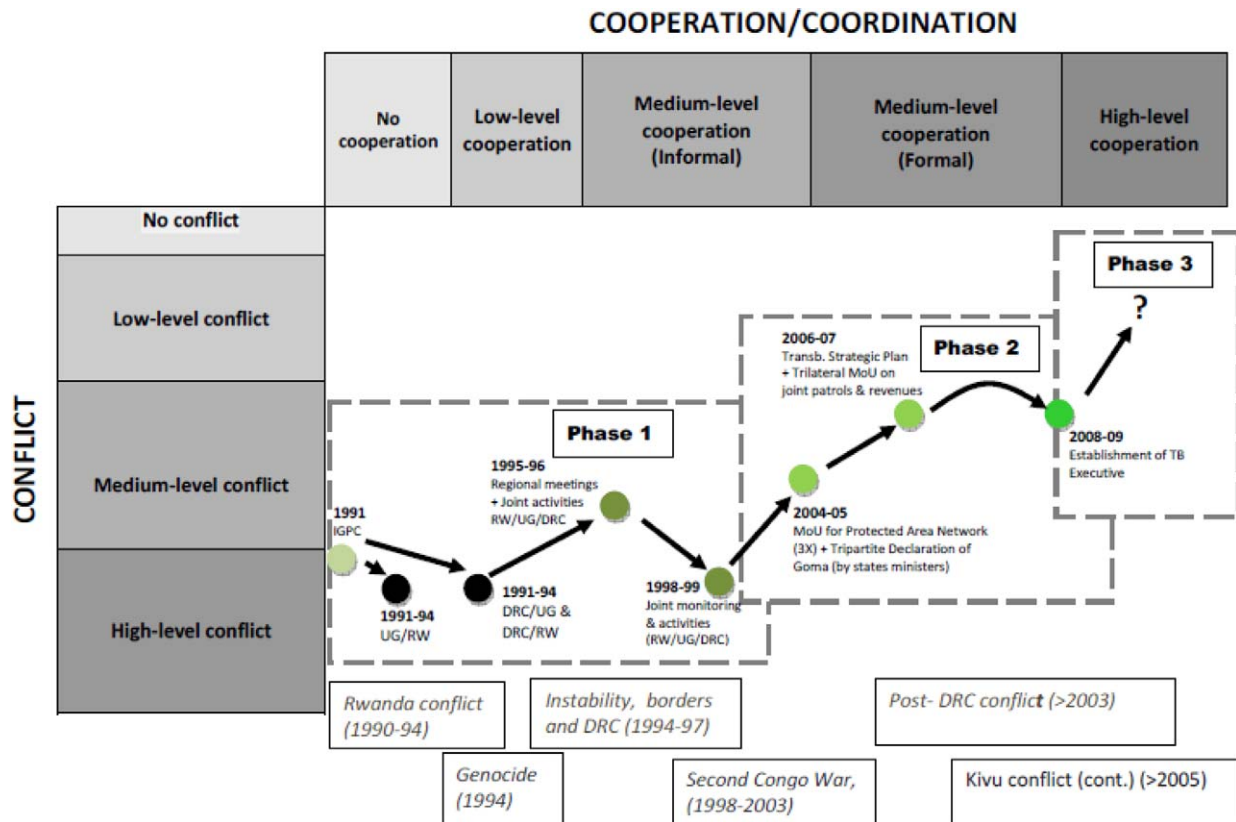


Figure 1. Transboundary interaction in the Greater Virunga

included mainly communication and meetings between partners, but no joint activities.

1990–94: Collaboration despite a generalized regional context of conflict and insecurity (high conflict, low cooperation)

The first half of the 1990s was characterized by high-level intensity conflict in the region involving Rwanda, Uganda and the DRC. During this period, the three countries’ interstate political relations were very tense and violent conflict centred on two factions: the Hutu-dominated Rwandan government supported by President Mobutu in DRC, and the Tutsi-based Rwanda Patriotic Front (RPF) supported by Uganda. From the 1950s until 1990, around a million Rwandan Tutsis had fled the country during successive waves of interethnic violence. The RPF was formed in Uganda among some of those exiled Tutsis who learned warfare fighting in the National Resistance Army that displaced the anti-Tutsi Milton Obote in Uganda and brought Yoweri Museveni to power. Relations between Rwanda and Uganda were such that the borders were closed throughout the 1990–94 Rwandan war.

During this period the transboundary park areas themselves played a role in the conflict. For example, the RPF’s second attempt to invade Rwanda, in January 1991, was launched through the Volcanoes National Park. The parks would later become escape routes for millions fleeing the violence. Set against this context of generalized conflict and regional instability, it was remarkable that conservation partners were able to bring together the three Protected Area Authorities (PAAs) in 1991 and reach an agreement on a conservation programme involving all three countries with an evolving framework for regional collaboration. The International Gorilla Conservation Programme (IGCP) was founded in 1991 as a partnership between the African Wildlife Foundation (AWF), Fauna & Flora International (FFI) and the World Wide Fund for Nature (WWF). During 1991–94, IGCP’s transboundary activities were largely confined to DRC and Rwanda, with bilateral ‘regional meetings’ with representatives of the two PAAs and cross-border visits by field personnel. From November 1993 until the genocide of April 1994, there was a brief period of organizing joint patrols with teams of around ten rangers spending about a week working and camping

together. At that time, relations between Rwanda and Uganda were too poor to engage in these patrols and meetings. However, there was limited cooperation between Congo and Uganda, for example to agree on a set of actions when gorillas crossed the border from Bwindi Impenetrable National Forest into the neighbouring Sarambwe Forest Reserve in DRC.

While we classify this as 'low' level cooperation, this is not intended to undermine either its importance or indeed its appropriateness at that time. The IGCP coordinator at that time described these patrols to us as

... really quite remarkable... There was real brotherhood in these events. I saw Congolese wearing Rwandan shirts and vice versa – they exchanged shirts like football players. (Personal communication)

The subsequent director of IGCP described the regional meetings as:

a foundation for building trust and collegiality. Friendships formed and wardens were able to deal with problems that otherwise might have involved the police... the kind of thing that had previously escalated into major incidents. Regional meetings had a deep impact. (Personal communication)

This coexistence of cooperation with intense conflict can partly be understood by the job-related affinity between front-line PAA staff which afforded a basis for building relationships and a collective identity. But it is also critical to note that this was, in effect, styled as an NGO–state model of transboundary cooperation. This involved the NGO working to position itself as a neutral facilitator, whose value was to provide opportunities for structured face-to-face communication in which shared goals were articulated and pursued.

1995–2003: Informal and field cooperation in the Greater Virunga (medium/high conflict low/medium (informal) cooperation)

This period of the region's history is marked to a considerable degree by the aftermath of the Rwandan war and genocide, including the massive exodus of Hutu refugees into Eastern DRC, their militarization of refugee camps near the Rwandan border, the activities of Rwandan and Ugandan troops within DRC and the outbreak of the second Congo war in 1998. With Mobutu still in power, Rwanda and DRC were bitter enemies following Paul Kagame's seizure of power in Rwanda. Mobutu's overthrow, hastened by Kagame's military intervention, brought Laurent Kabila to power in 1997 and temporarily

improved bilateral relations. However, many wounds were re-opened with the advent of the second Congo War, not only involving Rwanda but also Uganda, which stationed troops within DRC borders until the 2003 peace agreement. This was a period of intense looting of DRC mineral resources, facilitated by rebel and national armies, both within and outside of protected areas (Turner, 2007).

In spite of the region's lingering conflicts, collaboration between the three countries in the Greater Virunga made considerable progress through informal and field-level cooperation, including some concrete achievements that have undoubtedly contributed to conservation effectiveness, most notably an increase in the number of mountain gorillas (Kalpers et al., 2003). In institutional terms, the main achievement was the closer collaboration between the three Protected Area Authorities. This involved improved communication and information sharing between PAA staff, including regional training programmes and the inception of regional meetings of staff from headquarters and field offices of the 3 countries, and meetings between PAAs and NGOs to initiate a process of strategic planning. Ranger-based monitoring was developed and adopted as harmonized practice which contributed to information sharing (Gray & Kalpers, 2005), as did the introduction of joint and then coordinated patrols, collaborative gorillas censuses and anti-poaching activities.

Cooperation had taken place mainly at a low level and through informal medium-level cooperation, and this can be understood through reference to the background of violent conflict. Transboundary collaboration operated under very heavy constraints that meant that formal ministerial-level cooperation was not possible and the 'NGO–state model' was the most appropriate at the time. The need to work at practitioner level, supported by the facilitation skills of an NGO partnership, helps to explain why efforts at this stage focused on building a constituency of front-line collaborators:

We have been developing transboundary collaboration for more than ten years and without politicians being involved it did work. It was important for UWA, ICCN and ORTPN to do this – it was important to them despite all the wars. (Deputy director, ICCN, DRC, personal communication)

2004–10: Towards formalization and institutionalization of cooperation in the Greater Virunga (medium conflict, medium cooperation [formal])

The political context of the region in the mid to late 2000s has somehow improved, with greater political

stability in Rwanda and Uganda. In 2003, the governments of Uganda and the DRC signed the Luanda Agreement that stipulated the withdrawal of Ugandan troops from the DRC and the normalization of these neighbouring states' relations. However, the agreement did not resolve the causes of conflict in the Kivu region of eastern DRC, and sporadic fighting resumed in 2005, including continuation of the overspill of Rwandan Hutu–Tutsi violence on DRC soil. Relations between Rwanda and DRC have been poor, though improving in 2009 with joint military activity against the CNDP, a Tutsi rebel group that was widely believed to be supported by Rwanda. During this period of relative stability, Uganda and Rwanda have enjoyed strong backing from the international donor community, good economic performance and increased regional integration through the East Africa Community (EAC).

The backdrop to this period, then, is one of relative domestic security and prosperity in Rwanda and Uganda, continued war in North Kivu, and often poor political relationships between states. Despite these poor relationships it became widely felt that the involvement of governments in more formal transboundary conservation arrangements was a necessary and viable progression, albeit with certain risks. One of the key strengths of informal cooperation was seen to be the capacity for personal relationship-building:

It has been about confidence building through continuous interaction. At times we thought that others were bad, but this changes when you have met them a few times. (Chief conservation warden, Bwindi-Mgahinga Conservation Area, personal communication)

However, an approach to cooperation based on personal relationships also began to be seen as a weakness, leading to arguments for more formal institutionalization:

Institutions are the key to TBNRM [transboundary natural resource management] They are more stable than individuals who move away and more stable than NGOs who depend on short-term funds. (IGCP programme director, personal communication)

In the early 2000s, a process of NGO consultation funded by the MacArthur Foundation led to *A Framework for Conservation in the Albertine Rift 2004–2030* which covered 6 planning units, including Unit 2, the Greater Virunga landscape. Parallel to this effort at transboundary management, a regional meeting was held in 2004 between the executive directors of the PAAs of the three countries and IGCP, leading to a *Memorandum of*

Understanding for the Central Albertine Rift Protected Area Network. The key elements of this MoU were: (a) to agree to develop a Transfrontier Strategic Plan; (b) to coordinate management of the parks; and (c) to establish a transboundary secretariat. In 2005, this was strengthened by the Tripartite Declaration of Goma, signed by the three state ministers in charge of natural resource management. The declaration stressed that efforts would be made to move towards formal agreement for transboundary management and to lobby respective governments for financial commitment to implement the strategic plan. In 2006, the Ten Year Transboundary Strategic Plan was produced with support from IGCP and funding from the Dutch Embassy. In the same year a Trilateral MoU on the Collaborative Monitoring of and Sharing Revenues from Transfrontier Tourism Gorilla Groups was signed. In terms of institutionalization, in 2008 the Greater Virunga Transboundary Collaboration Secretariat (GV-TCS) came into existence, and in 2009 a ministerial agreement granted it legal status, rendering it independent from IGCP. These two events represent the beginning of the formal phase of TBNRM in the region.

With the developments of the second half of the 2000s, cooperation in the Greater Virunga has moved to a second phase (Figure 1), one of more formalized and institutionalized cooperation, as MoUs have been signed and the secretariat established. However, it is important to highlight that Phase 2 does not describe a move away from Phase 1 activities, but rather an additional set of relations and partners that broadens the scope of collaboration. Typically, the integration of collaboration through institutional levels begins at board level and moves downwards (Kanter, 1994); but whichever direction it takes, relationship-building at multiple levels provides stronger bonding than that at single levels.

Phase 3 remains hypothetical although it is expected by key partners in the Virunga area. It refers to progression from cooperation and coordination over separate, contiguous parks, to the creation of an integrated Transfrontier Protected Area with a single name/brand, a unitary management authority and harmonized rules and management practices. This would require agreement at presidential level. While this remains some way off, it is viewed as realistic in the longer term.

The pressure for this idea is building progressively and taking root. There has not yet been enough time to push this all the way, and now is not the right time. But the single fact that the strategic plan has been endorsed by 3 countries is a victory. Nothing can stop

eventual approaches to Kabila, Kagame and Museveni. (Independent consultant, personal communication)

Some authors consider that formal agreements are crucial for sustained transboundary cooperation, as they secure commitment and accountability (Sandwith et al., 2001; van der Linde et al., 2001) and establish the norms and national obligations of the states within transboundary contexts (Zbicz, 2003). On the other hand, protected area management is a politicized process (Hammill & Besancon, 2003) and formalization will only be an appropriate strategy when the social and political context is receptive to ministerial and presidential negotiation and agreement. Major political constraints include principles of national sovereignty, concerns for domestic security, poor diplomatic relations and lack of political will (van der Linde et al., 2001; van Amerom, 2002; Hamill & Besancon, 2003). Clearly, there are risks to forcing any move to Phase 3 before the time is right.

Discussion: Fostering cooperation amidst conflict

While the Greater Virunga region continues to face significant constraints to transboundary collaboration, we now consider some of the opposing drivers: those factors that have enabled progressive levels of cooperation. We identify four main enabling factors: improved political relations, third-party involvement, mutual benefit and relationships. The first of these has been adequately covered, that is, the generally more stable relationships between the three states and domestic stability in Rwanda and Uganda. Equally, we have made reference to the second factor, that is, the role of a partnership of conservation NGOs operating under IGCP (AWF, FFI, WWF). We should just add that there are several other NGOs supporting a wider process of transboundary collaboration in the Albertine Rift, including the Wildlife Conservation Society (who are extending transboundary cooperation across the Rwanda–Burundi border and further north along the Uganda–DRC border), the Dian Fossey Gorilla Fund International and the Albertine Rift Conservation Society, who coordinated the process of formulating the 2004–030 framework.

Mutual benefit is considered one of the fundamental conditions for successful partnership (Selsky & Parker, 2005). In transboundary park management, mutuality arises partly from the spatial configuration of the material landscape, including the ecosystem functions and the services that flow from these. Park authorities are dependent on each other in the long term for successful

conservation and for management of ecosystem services and disservices. For example, species such as elephant and mountain gorilla roam across borders. Actions in one country can easily affect another, such as when security measures in DRC disturbed elephant migration routes in Mikeno sector, resulting in a rapid rise in crop-raiding incidents in Rwanda (Gray & Kalpers, 2005). However, different groups of stakeholders hold different priorities in terms of what they seek to gain from cooperation. As discussed earlier, in addition to ecological gains, there are also potential benefits to economic development and to peacebuilding.

Managing benefits (and harms) is crucial and sensitive, owing to the potential for creating feelings of inequity and hostility (Lejano, 2006; Wolmer, 2003). We identify four facts that have helped to build perceptions of mutual benefit and avoid creation of new conflicts. First, *communication* has been central, from informal regional meetings in the early 1990s to formal meetings in the late 2000s, enabling agents to understand their mutual dependence and to build trust and norms (such as reciprocity) needed to act upon this. Second, *economic rules of the game* have been configured to institutionalize mutuality both across countries and, to some extent, across constituencies within countries. Specifically, because of the roving nature of gorillas and their high value for tourism income, the 2006 MoU on sharing revenue from transfrontier gorilla groups reduced the recriminations that previously resulted from migration of groups across borders:

Due to the gorilla revenue sharing agreement, all sides have an interest in gorilla safety. They used to be suspicious when habituated groups crossed boundaries, for example thinking that the Rwandans had used sugar canes to entice the Nyakagezi group across from Uganda. (IGCP programme officer, personal communication)

50% revenue sharing can create a lot of peace. (UWA deputy director, personal communication)

Third, consistent *rules* and harmonized standards can support faith in collective action. Revenue sharing is itself an example of this. Another is the harmonized standards for managing gorilla tourism in terms of numbers of visitors allowed per group, length of stay and so on. Fourth, *ownership* of the process is important to perceptions of equity and mutual interest. The structure of the current transboundary executive is such as to provide equal ownership to each authority:

It does not make sense for a PAA director or minister not to cooperate with the strategy – they would be

killing their own baby. (Executive secretary, GVTCS, personal communication)

There is no question about our commitment . . . it is our own creation. (Executive director, UWA, personal communication)

The enabling factors discussed above are predominantly institutional, relating to the structuring of economic relations and organizations. Such institutions help us to understand the emergence of cooperation alongside conflict, but only tell part of the story. The actions of different stakeholders cannot be fully understood through rational self-interest based on distribution of goods and bads, and it might be that transboundary parks work precisely where such considerations are augmented by positive personal relationships (Lejano, 2006; Lejano & Ingram, 2009). Kanter (1994) identifies a continuum from low to high engagement between collaborators: (i) strategic integration in which only leaders have relationships, (ii) tactical integration, in which middle managers also engage, (iii) operational integration, with day-to-day implementation staff collaborating, (iv) interpersonal integration, with denser networks of maturing personal ties, and (v) cultural integration, based on willingness to change ways of working to fit with partners. As has been stated, the NGO–state model of TBPA management in the Greater Virunga somewhat complicates such a progression, by proceeding through (iii) followed by (ii) and then (i), followed by (iv) and then, hypothetically, (v). In this case, the lack of formal agreement at the outset has not proved an obstacle to the TBPA, and the informal relationship-building among front-line staff may even have been the key to subsequent formalization. This is not unprecedented – in the Kgalagadi case, collaboration had taken place for 50 years before the presidents of Botswana and South Africa signed formal papers to create the Kgalagadi Transfrontier Park (Sandwith et al., 2001; Griffin et al., 1999).

We suggest that the creation of multiple-level relationships (perhaps regardless of starting level) over a long duration is crucial to the sustainability of cooperation in areas with recent experience of conflict. When partnership is based entirely on rational choice – on mutual expectations of future economic benefits (or even conservation gains) – the past is not so important (Parsons, 2007). However, when relationships are developed over long periods (recall shirt-swapping in the early 1990s) the past clearly starts to count, because trust and friendship are formed from experience. Relationships carry the weight of historical engagement to bear on future expectations through a kind of relational path dependence.

The institutional configurations mentioned above serve to support and protect this social capital.

We capitalize on what we have – history – even when there is fighting going on. (IGCP programme officer, personal communication)

The long duration of our work leads to credit. We maintain a presence and we build credit and draw on this when necessary. (WWF programme coordinator, personal communication)

Relationship-building has helped form the trust necessary to pursue institutional reforms that foster conditions of equity and coordination that support strong partnership. Indeed, we tentatively observe something of a virtuous circle between institutions and relations. On the one hand, relationship-building has built the trust necessary to pursue institutional reforms that support strong partnership. On the other hand, these acts of institutionalization provide displays of trust and mutuality while also providing conditions such as accountability that help to sustain relationships.

Conclusions

Our analysis of the transboundary conservation efforts in the Greater Virunga has shown that conflict and cooperation have not been mutually exclusive. Rather, they have coexisted, even when violent conflict has dominated the region. While in some respects this is remarkable, in other respects it might be seen as normal. It is the frameworks that we have hitherto chosen to represent conflict and cooperation that have defined one in terms of the absence of the other. Such one-dimensional frameworks serve well enough when we are only interested in a single type of conflict/cooperation, such as the diplomatic relations between states. But when we are also interested in additional relational dimensions, such as environmental management, they prove inadequate.

This inadequacy reveals itself when we consider environmental management in relation to a typology of ‘high’ and ‘low’ politics. Miriam Lowi (1995) argues that the antagonists of ‘high politics’ tend not to collaborate over the ‘low politics’ issues of economy and environment. She suggests that they would have to be ‘induced’ to cooperate over natural resource management (p. 9), either due to heavy strategic dependence on the resource in question, or the presence of a hegemonic power whose interest was served by cooperation (as induced Sudan to cooperate with Egypt over river Nile waters, for example). Contrary to this finding, however, we observe that

antagonists can and do cooperate over technical matters of managing material concerns and that in our case at least, they have done this in the absence of either of Lowi's conditions. The relatively straightforward lesson we learn from this is that management strategies matter: that the planned institutional landscape, including the channels of communication, the rules of the game and participation in governance appear to contribute to enabling low politics to proceed even in the absence of resolution to high politics.

But is there a bigger lesson? Can we assert a causal link between the simultaneous practice of low and high politics, such that the former is instrumental in transforming the latter? Our case study provides an observation of developing environmental cooperation that is at least in part synchronized with developing peace. However, it does not provide evidence of any causal link, nor does it propose a theory of change that would accompany such evidence. For example, one of the recent milestones in the advancement of peace was the 2009 decision for Rwanda and DRC to undertake joint military action against the CNDP. As we have no evidence to the contrary, we have to assume that this decision fell in the traditional realm of high politics and was not strongly influenced either by the improved relationships generated through low politics, or by the environment itself becoming shifted into the arena of high politics because of its contribution to a broadly conceived human security.

This article does not therefore conclude a deterministic relationship between environmental cooperation and the security policies of states. The two are clearly related to each other in our case, but the nexus of their trajectories is not based on simple, unilinear causality but on a more complex constitution of management spaces, featuring a dialectic between institutions and relationships. Getting the environmental management institutions right will not itself transform these spaces of politics in ways that can resolve the tragic violence familiar to this region. But it would also be a mistake to think that environmental politics operates in complete isolation from security decisions. For one thing, those who make security decisions spend much of their time dealing with and worrying about everyday low politics, and security decisions are likely to be framed by these dual responsibilities (Barnett, 1990). Following that line of reasoning, security decisions cannot be entirely isolated from environmental concerns. One should not so much think of whether environment can or should cross a line from low to high politics but rather how we understand the blurring of this divide, in terms of more complex

relationships between conflict and cooperation and between high and low politics.

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